
V. *A Description of some Insects which appear to exemplify Mr. William S. MacLeay's Doctrine of Affinity and Analogy.*
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Read December 17, 1822.

No objects are more interesting to the scientific naturalist than those which assume the external appearance of one tribe, while their more essential characters and their habits indicate that they belong to another. These objects a *prima facie* survey would often induce us to refer to a very different set of beings from that to which a more intimate acquaintance with their peculiar diagnostics and economy would lead us. And we shall find, the further we extend our researches, the traces of that plan of CREATIVE WISDOM by which a *symbolical relationship*, if I may so call it, connects such of his creatures, as in other respects are placed in opposition to each other, as well as a *natural affinity* those that really approximate. Writers in every department of natural history, when they have been endeavouring to thread the labyrinth of affinities, have been extremely puzzled by this remarkable circumstance. They were aware that those species which connect two proximate tribes, generally partake of the characters of both; but they were not sufficiently aware of this resemblance between objects that are connected by little or no affinity. Hence it has happened, not unfrequently, that objects have been referred not to the tribe to which they are really *related*, but to that which they resemble in some of their less essential characters.

Mr.

Mr. W. S. MacLeay, in his acute and learned *Horæ Entomologicæ*, has furnished the naturalist with a clue which, if heedfully followed, will enable him to guide himself through all the intricacies with which the circumstance here mentioned has perplexed his path. This gentleman has first stated with clearness and precision the distinctions, so often before confounded, between real affinity and those resemblances which are merely analogical; and has proved satisfactorily, that there exist between numerous objects in every department of nature striking coincidences as to external characters, which do not indicate that they are related to each other, or should be placed together in a natural arrangement.

In confirmation of the doctrine here alluded to, I have the honour to present to the Linnean Society a description of three new genera of insects which appear to wear the face of a tribe to which they do not belong.

COLEOPTERA PENTAMERA.

(*Harpalidæ.*)

CATASCOPIUS Kirby.

Character Essentialis.

Labium s. *Ligula* tripartitum: lobo intermedio abbreviato; lateralibus apice latioribus. *Labrum* emarginatum.

Character Artificialis.

Labium tripartitum: lobo intermedio abbreviato.

Labrum emarginatum: lobis rotundatis.

Palpi maxillares articulo secundo incrassato.

Oculi magni, valde prominuli.

Tibiæ anticæ intus medio emarginatæ.

Character

Character Naturalis.

CORPUS subdepressum, oblongum, glabrum, alatum.

CAPUT horizontale, subtriangulare: collo distincto. *Labrum* subquadratum, apice emarginatum: lobis rotundatis*. *Mandibulæ* subtriquetro-trigonæ, apice forcipatæ incurvæ acutæ, edentulæ†. *Maxillæ* lobo interiori incurvo unguiformi acutissimo, exteriori palpiformi biarticulato: articulis longitudine æqualibus‡. *Palpi maxillares* quadriarticulati: articulo primo minutissimo; secundo reliquis longiori crassiori subarcuato; tertio secundo breviori subclavato: extimo teretiusculo§. *Labium* tripartitum: lobis coadunatis; lateralibus longioribus dilatatis semicordatis planis||; intermedio lateralibus dimidio breviori convexo apice bisetigero¶. *Palpi labiales* triarticulati***? *Mentum* trilobum: lobo intermedio brevissimo rotundato††. *Antennæ* undecim-articulatæ subfiliformes: articulo primo incrassato; proximis tribus subclavatis sequentibus tenuioribus; reliquis oblongis compressis; extimo acuto‡‡. *Oculi* laterales, magni, valde prominuli. *Frons* apud oculos longitudinaliter bistriatus. *Nasus* s. *Clypeus* transversus: apice segmento circuli dempto.

TRUNCUS. *Thorax* quadrato-obcordatus, postice constrictus: angulis prominentibus, in medio canaliculatus, apud angulos posticos foveatus, antice et postice truncatus: lateribus marginatis. *Prosternum* lineare, apud basin pedum anticorum deflexum, apice rotundatum. *Mesosternum* brevissimum, apice emarginatum. *Metasternum* antice et postice mucronatum. *Scutellum* minutum, tri-

* TAB. III. Fig. 1. a.

† *Ibid.* c.

‡ *Ibid.* d.

§ *Ibid.* d, c.

|| *Ibid.* b. bb.

¶ *Ibid.* c.

** *Ibid.* a a.

†† *Ibid.* e.

‡‡ *Ibid.* f.

angulare.

angulare. *Elytra* apice oblique præmorso-truncata. *Epi-pleura** linearis, apud basin elytri dilatata. *Tibiæ* calcari-bus 2. 2. 2, anticæ intus ante medium emarginatæ. *Tarsi* articulo penultimo integro.

ABDOMEN in specimine nostro mutilatum.

At first sight the little insect exhibiting these characters might be mistaken for a species of *Notiophilus* of Duméril, or at least be regarded as belonging to a cognate genus. Its large and very prominent eyes, the shape in some measure of its thorax, the striæ of the disk of its elytra less impressed with puncta than those of the limb, as likewise its frontal furrows, give it no inconsiderable appearance of affinity to it. But a closer inspection proves that this is merely an *appearance*, and that in fact it belongs to a different tribe connected with the *Harpalidæ*. *Notiophilus* and its genuine affinities are distinguished by a particular character indicating some difference in their mode of taking or retaining their prey. The great majority of the *Carabi* of Linné are remarkable for a notch on the inner side of their anterior tibiæ, armed at its upper angle by a spur, which appears to be of use to them for the above purpose. In the *Harpalidæ* and many others this notch is nearly in the *middle* of the tibia; but in *Notiophilus* and its affinities its situation is close to its apex†. *Catascopus*, with respect to this part, falls into the former tribe‡. Again, in *Notiophilus* the labium consists only of a single lobe, or at least the lateral ones are much shorter than the central§; but in the *Harpalidæ* they are as long or longer||. In *Catascopus* also they are very conspicuous, being twice the length of the central lobe¶. In *Elaphrus*, *Notiophilus*, *Blethi-*

* See this term explained *Linn. Trans.* xii. 377.

† TAB. III. Fig. 2. g, a. ‡ *Ibid.* Fig. 1. g, a.

§ *Ibid.* Fig. 2. b, c.

|| Clairville *Ent. Helvet.* ii. t. x. xi. xii. &c. c.

¶ TAB. III. Fig. 1. b. dd.

sus, &c. the fore-breast (*antepectus*), or the part immediately under the thorax, is more or less covered with impressed puncta. In the *Harpalidæ* and *Catascopus* it is quite free from them. In the former tribe likewise the legs, especially the thighs, are slenderer and less robust than in the latter. The head moreover in *these* is narrower behind, so as to form a distinct neck; whereas in *those*, if any thing, it is widest behind, and the neck is formed by the convexity of that part and not by any constriction of it. From all these circumstances, I think, it is sufficiently evident that the relation of *Catascopus* to the *Harpalidæ* is that of *affinity*, while that which it bears to the *Elaphridæ*, insects which at first sight it most resembles, is merely that of *analogy*. But there is still another tribe of which it exhibits many characters, I mean those which constitute M. Latreille's first section of his *Carabici*, which have the head and thorax much narrower than the abdomen, and truncated or very obtuse elytra; for instance, *Anthia*, *Brachinus*, *Lebia*, &c.; and with these at one time I felt inclined to arrange the genus I am considering; but the different characters of the *Labium* convinced me that it ought rather to go with the *Harpalidæ*. Should any master in Entomology hereafter undertake a new arrangement of *Carabus* L., he may perhaps bring the *Harpalidæ* and the above section nearer to each other; and in this case *Catascopus* would very well connect the two tribes. The exact place of the genus I have not been able satisfactorily to ascertain. Of all the known genera of the *Harpalidæ* it seems to approach nearest to *Pterostichus* Bon., or *Sphodrurus* Clairv., principally on account of the shape of the thorax; but there must be several intermediate links between them.

Hardwickii. 1. C.

TAB. III. Fig. 1.

Long. corp. lin. $4\frac{1}{4}$.

Habitat in India a D. Hardwicke lectus? Ex Mus. D. Marsham. *Corpus* nitidum nigrum, supra violaceo et viridi tinctum. *Labrum* infra apicem utrinque punctis duobus impressis setigeris. *Frons* antice in medio canaliculatum. *Elytra* sublucunosa striata: striis, præcipue lateralibus, punctatis. Puncta insuper tria impressa inter striam a sutura secundam et tertiam. *Elytri* latera viridi-ænea.

The individual specimen here described being transfixed by the same peculiar pin which Major-General Hardwicke used for all the small insects that he collected in India, (many of which he gave to the late Mr. Marsham, at whose sale I purchased it,) I think I am warranted in my conjecture that this was one of them. I have therefore named it after this indefatigable collector and observer of insects, who merits richly to be so distinguished. There are two or three species apparently belonging to this genus in the rich collection of insects brought by Dr. Horsfield from Java.

(*Scolytidæ*?)

PSEUDOMORPHA, Kirby.

Character Essentialis.

Labium apice tridentatum. *Palpi maxillares* breves cylindrici.

Character Artificialis.

Labium apice tridentatum: dentibus æqualibus, rotundatis.

Labrum transversum, integrum, apice rotundatum.

Palpi labiales articulo extimo maximo, securiformi.

— *maxillares* maxilla haud longiores, cylindrici.

Antennæ breves.

Caput transversum sessile.

Character

Character Naturalis.

CORPUS depressum, oblongum, alatum.

CAPUT transversum, subrhomboidale, leviter inclinatum, thoracis sinu receptum, sessile. *Labrum* transversum, apice rotundatum*. *Mandibulae* forcipatae, breves, subtriquetro-trigonae, apice edentulae acutae, basi intus in lobum rotundatum dilatatae†. *Maxillae* breves: lobo interiori incurvo unguiformi acutissimo, intus setis ciliato; exteriori palpiformi biarticulato lobo interiori arcissime incumbenti‡. *Palpi maxillares* maxilla vix longiores, incrassati, cylindrici, quadriarticulati: articulis brevibus; primo reliquis minori obconico, sequentibus duobus cylindricis aequalibus, extimo paulo longiori apice truncato§. *Labium* minutum, brevissimum, apice tridentatum vel subtrilobum: lobis rotundatis; intermedio setis duabus instructo||. *Palpi labiales* securiformes triarticulati: articulo primo brevissimo; secundo paulo majori subtriangulari; extimo maximo fere trapeziformi¶. *Mentum* trilobum: lobis subaequalibus, acutis**. *Antennae* capite longiores, undecim-articulatae, filiformes: articulo primo incrassato arcuato; secundo sequentibus breviori apice incrassato; reliquis longitudine fere aequalibus, oblongiusculis, extimo acuto††. *Oculi* laterales, minus prominentes, subrotundi. *Nasus* declivis, apice transversus.

TRUNCUS. *Thorax* transversus, antice angustior, sinu lato pro receptione capitis exciso; lateribus rotundatis marginatis: margine explanato recurvo; angulis anticis et posticis rotundatis. *Prosternum* et *mesosternum* linearia. *Metasternum* antice et postice mucronatum. *Scu-*

* TAB. III. Fig. 3. a.

† *Ibid.* c.

‡ *Ibid.* d, b a.

§ *Ibid.* c.

|| *Ibid.* b. b b c.

¶ *Ibid.* b. a a.

** *Ibid.* e.

†† *Ibid.* f.

tellum triangulare. *Elytra* oblonga latere exteriori marginata: margine subrecurvo, apice obtusissima, vel oblique subtruncata: epipleura lineari apud basin elytri dilatata. *Pedes* breves: femoribus magnis compressis; tibiis tenuioribus; calcaribus 2. 2. 2.; anticis intus ante medium emarginatis*: tarsis subsetaceis; articulo penultimo integro: unguiculis binis simplicibus.

ABDOMEN depressum: segmentis ventralibus sex; tertio reliquis longiori; anali obtusissimo.

Catascopus merely assumes the aspect of a section different from that to which it really belongs, while every one sees at first sight that it is one of the *Carabi* of Linné; but the insect I have now described, though it exhibits the *characters*, has not the *aspect*, of that tribe; and even a practical entomologist, if he chanced to examine a specimen that had lost its antennæ, might at first regard it as a *Nitidula* or *Ips* F., or as coming near that genus in the system. But when he came to study it in detail, he would discover, to his surprise, all the essential diagnostics of one of Latreille's *Entomophagi*, as six palpi†, and the trochanter forming a fulcrum to the posterior thigh‡; and further, those that distinguish the *Carabici* of that author, the same kind of *labium*, *mentum*, and *maxillæ*, and particularly the remarkable notch in the inside of the anterior tibia, before noticed, peculiar to them. The characters that give it an air and general appearance unlike those of its tribe, are its sessile wide head received into the thorax, and its short antennæ and legs§.

It is difficult to say to which of Latreille's sections of his *Cara-*

* TAB. III. Fig. 3. g. a.

† What has been accounted by Fabricius and others as an additional or inner maxillary palpus is, strictly speaking, the outer or upper lobe of the maxillæ become palpi-form. In *Staphylinus*, &c. this lobe is also *biarticulate* but not *palpi-form*.

‡ TAB. III. Fig. 3. h. a. § The legs are made rather too long in the Figure.

bici it bears the greatest affinity. Its depressed body, its elytra very obtuse at the tip or subtruncate with an *epipleura* dilated at the base, and its blunt anus, seem to indicate an approximation to *Lebia*, *Dromius*, &c., and the labial palpi are not unlike those of one sex in *Tarus* Clairv. (*Cymindis* Latr.) belonging to the same section; but its sessile head brings it nearer to *Scolytus* Fab., the labium of which is not very dissimilar, and to the aquatic *Entomophagi*. Its thorax is shaped very much like that of *Hydrophilus caraboides*. Its maxillary palpi are unlike those of any other entomophagous genus yet known. Many links, however, remain to be discovered before we can connect this remarkable and puzzling genus with any one at present known. In going over most of the cabinets in London I could discover nothing that came at all near this insect, which I purchased at the sale of the late Mr. Francillon's collection. From the mode in which it is transfixed, and the pin used, I suspect that it was taken by Mr. Abbot in Georgia.

excrucians. 1. P.

TAB. III. Fig. 3.

Long. corp. lin. 5.

Habitat in Georgiae forsan aquaticis? Ex Mus. D. Francillon.

Corpus laeve, nitidum, subpilosum, rufum. *Labrum* antice punctis quatuor excavatis setigeris. *Oculi* in medio pilosi.

Coleoptra seriatim subpunctata, picea: margine externo rufo.

(*Melolonthidæ*.)

MIMELA, Kirby.

Character Essentialis.

Mandibulae dorso rotundatae, apice compressae bidentatae: dente inferiori truncato. *Antennae* novem-articulatae.

Character

Character Artificialis.

Labium urceolatum, emarginatum.

Maxillæ apice sex-dentatæ, nempe 3. 2. 1.

Mandibulæ dorso rotundatæ, apice compressæ bidentatæ : dente inferiori truncato.

Labrum brevissimum, transversum, medio depresso-excavatum, vel emarginatum.

Antennæ novem-articulatæ.

Podex tectus.

Character Naturalis.

CORPUS ex oblongo obovatum, convexum, glabrum, alatum.

CAPUT ex triangulari subrotundum, declive. *Labrum* transversum, brevissimum, medio depressum, utrinque antice barbatum, verticale*. *Mandibulæ* basi subtriquetro-trigonæ, intus orbiculatæ transversim sulcatæ†, apice compressæ incurvæ bidentatæ : dente superiori obtuso, inferiori truncato subemarginato, dorso rotundato‡. *Maxillæ* validæ mandibulæformes, apice incurvæ sex-dentatæ, dentibus nempe 3. 2. 1.§ *Palpi maxillares* in nostris speciminibus desunt. *Labium* infra apicem et apud basin constrictum unde quasi urceolatum, apice emarginatum||. *Palpi labiales* triarticulati : articulo primo minutissimo, intermedio subarcuato crassiori ; extimo ovato acuto¶. *Mentum* subquadratum**. *Antennæ* novem-articulatæ : articulo primo magno apice incrassato, quasi dolabriformi ; secundo brevi subturbinato ; proximis tribus subcylindricis ; sexto brevissimo fere pateræformi ;

* TAB. III. Fig. 4. a, c. † *Ibid.* c, b. ‡ *Ibid.* a. § *Ibid.* d. || *Ibid.* b. ¶ *Ibid.* a a.

** *Ibid.* c. What is here called the *Labium* is often considered as the *Mentum* in this tribe ; but if comparison be made with *Carabus* L., it will be found, I think, that c in the figure rather represents the *Mentum*.

tribus ultimis elongatis pilosis, clavam elongatam lineari-lanceolatam formantibus*. *Oculi* subhemisphærici prominuli. *Septum* irregulare a naso per tertiam fere partem oculi transcurrit. *Nasus* s. *clypeus* transversus, distinctus, antice rotundatus, marginatus: margine reflexo†. *Rhinarium* verticale, brevissimum‡.

TRUNCUS. *Thorax* transversus s. longitudine latior, tenuissime marginatus, antice angustior; sinu magno ad recipiendum caput exciso, postice obsolete trilobus: lobo intermedio rotundato, supra ad latera puncto ordinario impressus. *Prosternum* inter pedes anticos elevatum, compressum, apice dilatatum, oblique truncatum§. *Mesosternum* lineare, inter pedes intermedios latitans. *Metasternum* basi et apice mucronatum: mucrone postico bifido||. *Scutellum* triangulare. *Coleoptra* oblonga, striata: striis duplicatis, podicem, excepto summo vertice, obtegentia. *Pedes* robusti: femoribus posticis incrassatis; tibiis anticis apice bidentatis¶: dente exteriori longiori obtuso; interiori brevi acuto; calcaribus 1. 2. 2. posticis obtusis**; tarsorum unguiculis simplicibus inflexis††.

ABDOMEN convexum: segmentis ventralibus sex; primo brevissimo; ultimo depresso obtuso.

The insect from which I have taken the characters of this genus I originally met with at a dealer's; and though it was transfixted with a needle, which seemed to indicate that it was

* TAB. III. Fig. 4. f.

† *Ibid.* a, a.

‡ *Ibid.* b. I call the part, often conspicuous in this tribe, intervening between the nasus and the labrum, *Rhinarium*.

§ *Ibid.* i.

|| *Ibid.* k.

¶ *Ibid.* g.

** *Ibid.* h, a.

†† *Ibid.* l.

from

from China ; yet as his insects were almost all of them Brazilian, and its general habit and aspect were that of a tropical American type, I concluded that it came from that country, and placed it in my cabinet along with my species of *Areoda* of MacLeay. Afterwards, being shown by a young lady a collection of undoubted Chinese insects, I found amongst them several specimens of *Mimela*, one of which she kindly gave me. Upon receiving this, on my return to Barham I set about a closer examination ; and upon dissection I found, though many of its external characters seemed borrowed from South American types, yet that in those which were most essential, it came nearest to an Asiatic one, a well known species of which was abundant in China ; and others have since been discovered in Java, and perhaps in Ceylon. I allude to Mr. W. S. MacLeay's genus *Euchlora*.

The Brazil genus, of which *Mimela* assumes the external appearance, is *Areoda* of the same learned author, who has observed with regard to *Euchlora*, "En genus Asiaticum *Areodæ* proximum*!" But that which I am describing still more nearly resembles it, wearing as it were its very habit ; so much so, that at first sight it might almost be mistaken for a small specimen of *Areoda Leachii*. The general colour of the animal ; the sculpture of the head, thorax and elytra ; its distinct nasus or clypeus ; its labium, labrum, maxillæ and legs, are all very similar. But in *Mimela*, as in *Euchlora*, the mandibulæ are concealed under the nasus ; whereas in *Areoda* they are very visible, nor have they the dorsal process or tooth observable in the *Rutelidæ*. In the two former the antennæ consist of nine joints, in the latter of ten. In *them* the posterior lobe of the thorax is more obsolete than in *this*. In *Areoda* the last dorsal segment of the abdomen is not covered by the elytra ; but in *Mimela* (a circum-

* *Horæ Entomolog.* 148.

stance in which it agrees with *Pelidnota* MacLeay, another South American type,) only the tip is uncovered. The latter, *Mimela*, has an elevated prosternum, and a metasternum with a very short anterior mucro, so as to leave the mesosternum visible; whereas in the former, *Areoda*, the prosternum is not visible without dissection, and the anterior mucro of the metasternum is elongated so as entirely to cover and conceal the mesosternum. The abdomen also in *Areoda* is covered underneath with an infinity of very minute punctula, which give it a silky appearance; whereas in *Mimela*, and likewise *Pelidnota*, it is lævigated.

Though *Mimela* agrees in most of its essential characters with *Euchlora*, it differs sufficiently to form at least a *subgenus* in a modern system. In the former the mandibulæ have only two teeth at their apex; in the latter they have three. In *this* also the body is covered with innumerable impressed puncta of the same size; whereas in *that* the puncta are of two sizes, the larger scattered, the smaller almost invisible and quite covering the surface. In *Euchlora* the last dorsal segment of the abdomen and part of the last but one are uncovered, the very reverse of which, as we have seen, takes place in *Mimela*. Whether the inner claw of the four anterior legs is bifid at the apex in the latter as it is in the former I cannot say, these tarsi being mutilated in my specimens.

I shall here mention one very remarkable circumstance, noticed by no writer that I have met with, which distinguishes the mandibulæ of the tribes of *Melolontha* F., though less conspicuous in *Melolontha* itself than in the *Euchlora*, *Rutelidæ*, *Anoplognathidæ*, *Chalepus*, &c. The *molar* part, or that which appears destined to comminute the food, is an orbicular or subquadrate flat plate at the inner base of the mandibles, scored out into numerous alternate transverse ridges and fur-

rows*. When the mandibles are open, the food, after it has been divided by their apex, must pass between these plates, which, supposing that the ridges of one mandible are received by the furrows of the other, as is most probably the case, must have vast force in comminuting the food, not so much by the friction of the plates, since that could scarcely take place in consequence of the above structure, but from their pressure and the action of the sharp ridges. The mandibula indeed is particularly fitted for this double office, the upper part being thin and adapted to cutting†, and the base vastly thick and strong, as if its office was great pressure‡. At the base of the mandible in the genus before us, but not in all, there are other short furrows forming an acute angle with the transverse ones and opening into the gullet. In the *Dynastidæ* MacLeay, the molar space is visible, but is smaller, and has fewer furrows. In *Dynastes Enema* it has only two obtuse ridges and as many furrows, and appears evidently calculated to masticate, but more grossly, a harder substance than what is submitted to the action of the mandibles of *Melolontha* F. In a specimen of *Areoda* I found adhering to this molar plate a substance resembling the pollen of flowers, which may hence be conjectured to be the food of that genus§.

From this account it seems I think evident, that a modification of the three kinds of teeth of vertebrate animals is to be found in these tribes as well as the *Orthoptera*, in which Marcelle de Serres detected them; for we find the *incisores* at the apex of the mandible, the *molarès* at its base, and the *laniarii* at the apex of

* TAB. III. Fig. 4. c, b.

† *Ibid.* a.

‡ *Ibid.* b. right hand figure.

§ Since this paper was written, I met accidentally with a passage in Cuvier's *Anatomie Comparée* (iii. 321—.), by which it appears that he had observed in the mandibles of the larvæ of the *Lucani* "vers leur base, une surface molaire plane et striée;" but he does not appear to have noticed this structure in any perfect insect.

the maxillæ*: though with respect to these last, I believe their primary use in very many insects is to hold the food for the action of the mandibulæ.

MIMELA CHINENSIS.

TAB. III. Fig. 4.

Long. corp. lin. 9.

Habitat in China. Ex Mus. D^m Crane.

Corpus glaberrimum, luteo-virens, colore sub luce mutabili, subtus cupreo tinctum. *Caput* supra antice punctis confluentibus rugulosum, postice punctis sparsis conspersum, interque puncta creberrima minutissima, vix sine lente forti conspicua, subtus fulvum. *Antennæ* fulvæ. *Thorax* punctis sparsis punctulis minutissimis interjacentibus ut in capite. *Elytra* subrugosa, puncto-striata: striis intermediis per paria ordinatis, interstitiis punctatis et punctulatis ut in thorace, &c., apice gibba.

The insect I shall now describe is of a different order: and though it does not so strikingly assume the characters of another tribe or genus; yet, as it appears to partake of those of both *Agrion* and *Lestes*, exhibiting the general appearance and wings of the former, with some diagnostics of the latter, it seems not improperly introduced.

AGRION BRIGHTWELLI.

Nigrum: alis basi, in altero sexu apice macula, sanguineis.

TAB. III. Fig. 5.

Long. corp. unc. $2\frac{1}{4}$.

Expans. alar. unc. $2\frac{3}{4}$.

Habitat in Brasilia. Ex Mus. D. Brightwell.

* TAB. III. Fig. 4. d.

Corpus nigrum, sub sole splendore obscure metallico subnitens. *Caput* subpilosum. *Truncus* brunneo-niger, supra lineis tribus longitudinalibus, intermedio elevato, nigris, sub alis primoribus strigis tribus obliquis, superiori obsoletiori, pallidis. *Alæ* subhyalinæ, basi læte sanguineæ, posticis apice macula subrotunda ejusdem coloris. *Stigma* nigrum oblongo-quadratum. *Abdomen* elongatum, tenue, transversim rugulosum, basi et apice subincrassatum. *Forceps* analis rectus? inferiori subincurvo.

N. B. In quibusdam speciminibus macula rotunda sanguinea alas primores item apice ornat. An sextus varietas?

Nomen dedi in honorem D. Brightwell Norvicensis, insectorum collectoris indefessi, felicitis; indagatoris acuti, docti.

The upper anal forceps in the specimens of this insect that I have had an opportunity of examining were mutilated; I cannot therefore be positive that it does not approach nearer to *Lestes* of Dr. Leach, the stigma of which its wings exhibit, than to *Agrion*; but as these last are not suddenly narrower at their base, as in the former genus, I have considered it as belonging to the latter.

EXPLANATION OF THE FIGURES IN TAB. III.

Fig. 1. *Catascopus Hardwickii* and its details.

- a. The Labrum.
 - b. The Labium. *aa.* Labial Palpi. *bb.* Exterior lobe of Labium. *c.* Intermediate ditto.
 - c. The Mandible.
 - d. The Maxilla. *a.* The Base. *b.* The Apex. *c.* Exterior maxillary Palpus.
 - e. The Mentum.
 - f. The Antenna.
 - g. The anterior Tibia. *a.* The Notch.
2. Details of *Notiophilus* Leach. Roman and italic letters refer to the same parts as in Fig. 1.
3. *Heteromorpha excrucians*.
- a. The Labrum.
 - b. The Labium. *aa.* Labial Palpi. *bb.* Exterior lobe of Labium. *c.* Intermediate ditto.
 - c. The Mandible.
 - d. The Maxilla. *a.* The Base. *b.* The Apex. *c.* Exterior maxillary Palpus.
 - e. The Mentum.
 - f. The Antenna.
 - g. The anterior Tibia. *a.* The Notch.
 - h. Posterior Leg. *a.* Trochanter, acting as a fulcrum to the thigh.
4. *Mimela chinensis* and its details.
- a. Portion of the anterior part of the Head. *a.* The Nasus. *b.* The Rhinarium. *c.* The Labrum.
 - b. The Labium and Mentum. *aa.* Labial Palpi. *b.* Labium. *c.* Mentum.

Fig.

- Fig. 4. *cc.* Different views of the Mandibulæ. *c.* Interior face of ditto. *a.* Apex. *b.* Base, or orbicular transversely-sulcated Mola.
- c.* Lateral view of Mandible.
- d.* The Maxilla. *a.* The Base. *b.* The Apex. *c.* Exterior maxillary Palpus.
- e.* The Mentum.
- f.* The Antenna.
- g.* Portion of anterior Tibia. *a.* Its two Teeth.
- h.* ——— of posterior ditto. *a.* Its Calcaria.
- i.* Prosternum.
- k.* Metasternum. *a.* Anterior Mucro, looking to the Head.
- b.* Posterior ditto, looking to the Anus. *cc.* Posterior Coxæ.
- l.* Last joint of posterior Tarsus, to show the Claw.
5. *Agrion Brightwelli.*